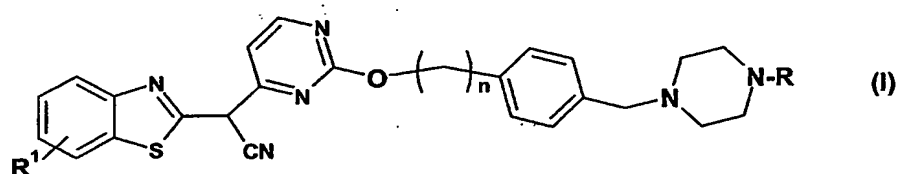


Claims

1. Piperazine benzothiazole derivatives according to formula I



as well as its tautomers, its geometrical isomers, its optically active forms as enantiomers, diastereomers and its racemate forms, as well as pharmaceutically acceptable salts thereof, wherein

R is selected from the group comprising or consisting of hydrogen, C₁-C₆-alkyl, C₁-C₆-alkyl aryl, heteroaryl, C₁-C₆-alkyl heteroaryl, C₂-C₆-alkenyl, C₂-C₆-alkenyl aryl, C₂-C₆-alkenyl heteroaryl, C₂-C₆-alkynyl, C₂-C₆-alkynyl aryl, C₂-C₆-alkynyl heteroaryl, C₃-C₈-cycloalkyl, heterocycloalkyl, C₁-C₆-alkyl cycloalkyl, C₁-C₆-alkyl heterocycloalkyl, C₁-C₆-alkyl carboxy, acyl, C₁-C₆-alkyl acyl, acyloxy, C₁-C₆-alkyl acyloxy, C₁-C₆-alkyl alkoxy, alkoxycarbonyl, C₁-C₆-alkyl alkoxycarbonyl, aminocarbonyl, C₁-C₆-alkyl aminocarbonyl, acylamino, C₁-C₆-alkyl acylamino, ureido, C₁-C₆-alkyl ureido, amino, C₁-C₆-alkyl amino, sulfonyloxy, C₁-C₆-alkyl sulfonyloxy, sulfonyl, C₁-C₆-alkyl sulfonyl, sulfinyl, C₁-C₆-alkyl sulfinyl, sulfanyl, C₁-C₆-alkyl sulfanyl, sulfonylamino, C₁-C₆-alkyl sulfonylamino;

R¹ is selected from the group comprising or consisting of H, halogen, cyano, nitro, amino, C₁-C₆-alkyl, C₂-C₆-alkenyl, C₂-C₆-alkynyl, C₁-C₆-alkyl-aryl, aryl or heteroaryl, C₁-C₆-alkyl-heteroaryl, -C(O)-OR², -C(O)-R², -C(O)-NR²R², -(SO₂)R², with

- 40 -

R² and R^{2'} being independently selected from the group comprising or consisting of hydrogen, C₁-C₆ alkyl, C₂-C₆ alkenyl, C₂-C₆ alkynyl, aryl, heteroaryl, C₁-C₆-alkyl aryl, C₁-C₆-alkyl heteroaryl;

n is an integer from 0 to 3.

- 5 2. A piperazine benzothiazole derivative according to claim 1, wherein R¹ is hydrogen.
3. A piperazine benzothiazole derivative according to claim 1 or 2, wherein R is selected from the group consisting of hydrogen, C₁-C₃ alkyl, aminocarbonyl, C₁-C₆-alkyl alkoxy, C₁-C₆-alkyl alkoxy, C₁-C₆-alkyl acyloxy, alkoxy, C₁-C₆-alkyl aminocarbonyl.
- 10 5. A piperazine benzothiazole derivative according to claim 4, wherein R is H, or C₁-C₃ alkyl, in particular a methyl or an ethyl moiety, or C₁-C₆-alkyl alkoxy.
6. A piperazine benzothiazole derivative according to any of the preceding claims, wherein n is 1.
7. A piperazine benzothiazole derivative according to any of the preceding claims
- 15 selected from the following group:

1,3-benzothiazol-2-yl[2-({4-[(4-methylpiperazin-1-yl)methyl]benzyl}oxy)pyrimidin-4-yl]acetonitrile

1,3-benzothiazol-2-yl[2-({4-[(4-benzyl-piperazin-1-yl)methyl]-benzyl}oxy)pyrimidin-4-yl]acetonitrile

- 20 1,3-benzothiazol-2-yl(2-{[4-(piperazin-1-ylmethyl)benzyl]oxy}pyrimidin-4-yl)acetonitrile

1,3-benzothiazol-2-yl[2-({4-[(4-formylpiperazin-1-yl)methyl]benzyl}oxy)pyrimidin-4-yl]acetonitrile

[2-(4-[(4-acetylpiperazin-1-yl)methyl]benzyl)oxy]pyrimidin-4-yl](1,3-benzothiazol-2-yl)acetonitrile

(3H-Benzothiazol-2-ylidene)-{2-[4-(4-[1,2,4]oxadiazol-3-ylmethyl)-piperazin-1-ylmethyl]-benzyloxy}-pyrimidin-4-yl}-acetonitrile

5 4-(4-{4-[(3H-Benzothiazol-2-ylidene)-cyano-methyl]-pyrimidin-2-yloxymethyl}-benzyl)-piperazine-1-carboxylic acid methyl ester

2-[4-(4-{4-[(3H-Benzothiazol-2-ylidene)-cyano-methyl]-pyrimidin-2-yloxymethyl}-benzyl)-piperazin-1-yl]-acetamide

10 (2-{4-[4-(2-Amino-acetyl)-piperazin-1-ylmethyl]-benzyloxy}-pyrimidin-4-yl)-(3H-benzothiazol-2-ylidene)-acetonitrile

[4-(4-{4-[(3H-Benzothiazol-2-ylidene)-cyano-methyl]-pyrimidin-2-yloxymethyl}-benzyl)-piperazin-1-yl]-acetic acid methyl ester

(3H-Benzothiazol-2-ylidene)-(2-{4-[4-(2-methoxy-ethyl)-piperazin-1-ylmethyl]-benzyloxy}-pyrimidin-4-yl)-acetonitrile

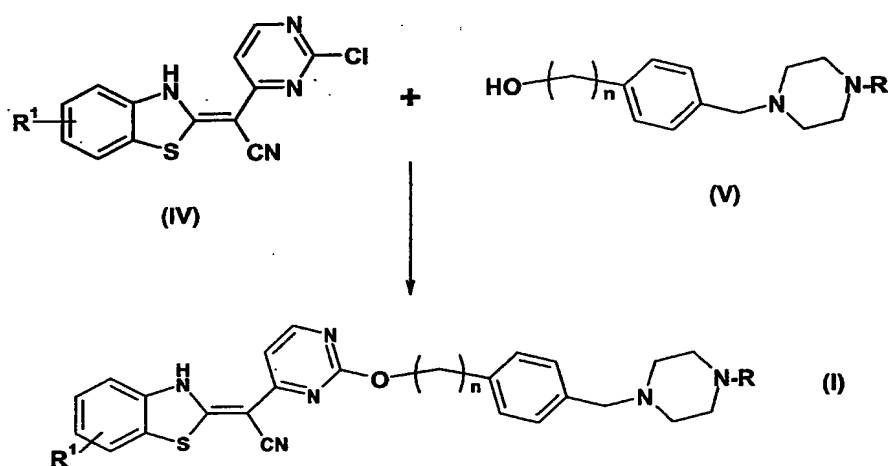
15 4-(4-{4-[(3H-Benzothiazol-2-ylidene)-cyano-methyl]-pyrimidin-2-yloxymethyl}-benzyl)-piperazine-1-carboxylic acid dimethylamide

(3H-Benzothiazol-2-ylidene)-{2-[4-(4-ethyl-piperazin-1-ylmethyl)-benzyloxy]-pyrimidin-4-yl}-acetonitrile

20 (3H-Benzothiazol-2-ylidene)-(2-{4-[4-(2-hydroxy-ethyl)-piperazin-1-ylmethyl]-benzyloxy}-pyrimidin-4-yl)-acetonitrile

8. A piperazine benzothiazole derivative according to any of the preceding claims for use as a medicament.

9. Use of a piperazine benzothiazole derivatives according to any of claims 1 to 7 for the manufacture of a medicament for the treatment of cerebral ischemic disorders or CNS disorders.
10. Process for the preparation of a piperazine benzothiazole derivative according to any of
5 claims 1 to 7, comprising the following step:



whereby R, R¹ and n are as above described .